

# URUGUAY

## FOOT AND MOUTH DISEASE REPORT

6<sup>th</sup> February 2002

### Background

On 23<sup>rd</sup> April 2001, a suspicion of FMD occurrence was reported. The Veterinary Services investigated and clinically confirmed the disease on 24<sup>th</sup> April 2001.

The official laboratory confirmed the diagnosis by serology, identifying antibodies against type A virus (VIAA and ELISA) on 25<sup>th</sup> April 2001.

On May 3<sup>rd</sup> 2001, PANAFTOSA confirmed serotype A. Viral isolation and biological characterization studies were subsequently carried out.

Although the outbreak reported (index outbreak) was the first to be reported, it was found that the primary infection occurred in a neighbouring farm and serological findings suggest that the infection started eight days before.

The original outbreak occurred on the 6<sup>th</sup> Police District, Paraje Palmitas, Department of Soriano (western part of the country). On successive days, an epidemic increase of the disease was confirmed in the Departments of Soriano and Colonia.

The most probable hypothesis is that the virus was mechanically introduced from active outbreaks of the disease in the Republic of Argentina, in areas close to our border. This hypothesis is supported by the fact that the virus type identified is the same in both cases and cattle and other species susceptible to FMD from Argentina have not been introduced into Uruguay.

The Departments of Soriano and Colonia have a mixed farming system, combining milk and meat production with intensive agriculture. This system involves intense movement of trucks, machinery and persons. This is an important factor contributing to viral spread (high contact rate and higher probabilities of massive mechanical spread). The investigation carried out suggests that the latter was a determinant factor in the spread of the disease.

This approach is further supported by the results of the particularly intense sero-epidemiological surveillance carried out in the area along the Río Uruguay during the immediate previous period, which confirmed that during the months of March and April 2001 there was absence of viral activity.

The epidemiological investigation of the outbreaks reported outside the Departments of Soriano and Colonia suggests mechanical spread through trucks, farming machinery and passage of persons (tourists, hunters and

persons related to the agricultural sector, working both in the Departments of Soriano and Colonia and Argentine) in most cases.

### **Actions taken**

- Immediate intervention, banning of animal movement and stamping out of the sick and in contact animal population susceptible to FMD, of affected farms within the outbreaks zone, was decided. It began on April 24<sup>th</sup>, 2001.
- Immediate and voluntary discontinuation of Export Certification as from April 24<sup>th</sup>, 2001 as well as discontinuation of slaughter and production for export.
- Banning of movement of animals, of movement and transit of people and products, and isolation of the Department of Soriano, was implemented on April 24<sup>th</sup>, and extended to the Department of Colonia, on April 26<sup>th</sup>, 2001 with the support of the Police and the Army.
- The ban on the movement and transit of animals was extended to all the country, on a national wide scale, as from April 27<sup>th</sup>, 2001, with the support, enforcement and back-up of the Police and Army due the powers and attributions of the DGSG. The response of the CCA (Competent Central Authority) was based on the National Animal Health Emergency Situation declared by Resolutions from the General Department of Livestock Services, and within the mandatory regulations provided by the Animal Health Legislation (Law N° 3,606, dated April 13<sup>th</sup>, 1910 and Law N° 16,082, dated October 4<sup>th</sup>, 1989).
- As a matter of fact, the countrywide stand still measure, adopted on April 27<sup>th</sup>, 2001, stopped all slaughter activities, public auctions of animals and market activities at the national level.
- The use of emergency ring vaccination, as well as stamping out of animal population within the outbreak zones and of exposed cattle population, within a 10 km radius around the affected herds, was ordered and implemented as from April 26<sup>th</sup>, 2001. These measures were extended to areas outside the original outbreak when animal movements prior to April 24<sup>th</sup> were detected and traced, or when new FMD outbreaks were confirmed.
- Banning of animal movement was maintained until June 7<sup>th</sup>, 2001, when the first round of massive emergency vaccination was completed throughout the country. Conditions and requirements for the movement of animals, defining restricted zones and areas, were set on June 7<sup>th</sup>, 2001. Movement restrictions and controls have been reviewed only after the end of the second round of massive vaccination, on July 22<sup>nd</sup>, 2001.

- The decision to discontinue stamping out was taken on April 29<sup>th</sup>, and was enforced on April 30<sup>th</sup>, 2001, when ongoing operations were finished.
- An extensive buffer zone was defined on April 30<sup>th</sup>, where ring vaccination was adopted and began on May 1<sup>st</sup>. This measure was aimed to contain and reduce the spread of the disease outside the South West region alongside the Uruguay River, therefore protecting the North, Central and South East regions, where large extensive beef farming systems prevail.
- The decision to carry out the first massive emergency vaccination, including all the cattle population on a national scale, was adopted and enforced as from May 5<sup>th</sup>, 2001. The vaccination began at the border with Brazil, and proceeded from North to South and from East to West and was completed on June 7<sup>th</sup>, 2001.
- The second round of massive emergency vaccination (re-vaccination) began on June 15<sup>th</sup> and was completed on July 22<sup>nd</sup> 2001 providing, due to its booster effect, an expected 99 to 100% effective protection. This helped consolidate the mass population protection.
- According to the best technical standards the highest protection efficacy of the vaccine, in FMD non vaccinated populations, is obtained from day 15<sup>th</sup> to day 30<sup>th</sup> post first vaccination and, maximum booster effect is obtained, with second vaccination when application is done on day 45<sup>th</sup> to day 60<sup>th</sup> after the first dose.
- Following the reference guidelines provided by PANAFTOSA, supported by experience and research developed in South America during the last twenty years, the effort of the massive vaccination, as an effective control measure, concentrated in the cattle population.
- Sheep have always played a secondary role in the epidemiology of FMD in Uruguay and South America. According to the field evidence and performance of the types and strains present, there is no justification to practice massive vaccination in this species. A serological survey was carried out in this species, with results that range from 1.9% to VIAA, in animals within the focus, to 0.3% in animals outside the focal areas, evidencing the irrelevant role played by sheep in the FMD outbreak in Uruguay.
- Pigs are very important, due the well-known role of the species in viral multiplication, but, since response to vaccination is poor, massive vaccination was not applied.

### **Vaccination policy**

- The first massive emergency vaccination, including all the cattle population on a national scale, began on 5<sup>th</sup> May 2001, at the border with

Brazil, and proceeded from North to South and from East to West and was completed on June 7th, 2001.

- The second round of massive emergency vaccination (re-vaccination) began on June 15<sup>th</sup> and was completed on July 22<sup>nd</sup> 2001 providing, due to its booster effect, an expected 99 to 100% effective protection. This helped consolidate the mass population protection.
- During November 2001, all calves born during the year 2001 were vaccinated or re-vaccinated. This vaccination period finished on November 30<sup>th</sup>, 2001. Most of the calves born between the spring of 2000 and the winter of 2001 received a second or third dose, while the calves born between August and the end of 2001 received the first dose.
- At present, i.e., during February 2002, the whole cattle population is being vaccinated. It shall be re-vaccinated in May. Around 23 million doses will be used. In November, all calves born during 2002 shall be vaccinated.
- The plans for 2003 include massive vaccination in February. In May, animals under 2 years shall be re-vaccinated. At this moment, an evaluation of the region's sanitary situation shall be carried out and new policies defined accordingly.

### **Epidemiology (present situation)**

By 6<sup>th</sup> February 2002, the total number of confirmed and controlled foci since 24<sup>th</sup> April 2001, was 2057.

The disease has extinguished in all 2057 affected holdings. The criterion is that no diseased animals are detected in the last 30 days. At this date there are no foci with viral activity.

The last focus of the disease was reported on 21<sup>st</sup> August 2001.

**EVOLUCION DE FOCOS EN URUGUAY**  
**24 DE ABRIL 2001 AL 6 DE FEBRERO 2002**

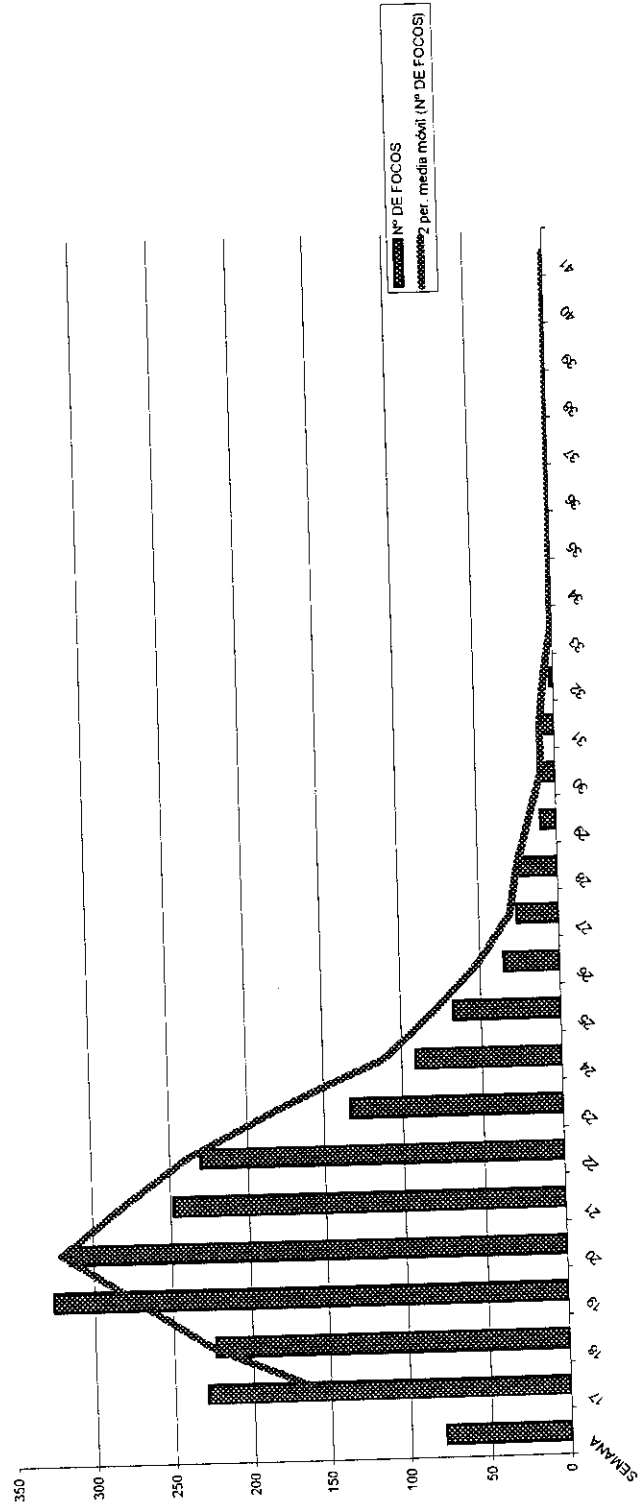
	TOTAL	FOCOS	FOCOS	FOCOS
	DE FOCOS	SIN ANIM ENF.	EXTINGUIDOS	menos de
			más 30 días	30 días
	al 6/02	al 6/02	al 6/02	al 6/02
ARTIGAS	49	49	49	0
CANELONES	29	29	29	0
CERRO LARGO	33	33	33	0
COLONIA	379	379	379	0
DURAZNO	94	94	94	0
FLORES	73	73	73	0
FLORIDA	121	121	121	0
LAVALLEJA	29	29	29	0
MALDONADO	12	12	12	0
MONTEVIDEO	0	0	0	0
PAYSANDU	84	84	84	0
RIO NEGRO	177	177	177	0
RIVERA	20	20	20	0
ROCHA	18	18	18	0
SALTO	60	60	60	0
SAN JOSE	81	81	81	0
SORIANO	557	557	557	0
TACUAREMBO	167	167	167	0
TREINTA Y TRES	74	74	74	0
<b>TOTAL</b>	<b>2057</b>	<b>2057</b>	<b>2057</b>	<b>0</b>

Mean attack rates of 5.00 % for cattle have been recorded on the direct contact and at risk populations (76,579 / 1,518.965) and 0.02 % for sheep (236/ 947,879) involved in the affected 2,057 farms affected and the surrounding areas.

The total number of doses used in the two rounds of emergency massive vaccination (May-June and June-July 2001) amounted to almost 24 million doses. They represented almost 16 % more than the 20.6 million estimated, according with the livestock census of the year 2000.

The evolution of the outbreak is shown in the following graphics and provides clear evidence of the trend followed by the epizootic.

# Uruguay Focos de Fiebre Aftosa por semana período del 23/04/01 al 22/10/01



At present, we can assure that the disease has been controlled, the strategy applied has been successful, the vaccines used were appropriate and the emergency actions were positive. In fact, during the last 169 days, no new focus has been reported.

### **Seropidemiological surveillance**

Seroepidemiological surveillance in FMD affected areas, carried out in August 2001 indicated that infection in sheep was lower than originally expected (7,684 samples were processed, with 206 VIAA positives, a prevalence of 2.7%).

These results indicate that the animals had been exposed to infection but the Uruguayan authorities considered that the low prevalence demonstrated that sheep did not play a role in the epidemic.

A complementary seroepidemiological study carried out in September 2001 in areas neighbouring FMD outbreaks, concluded that sheep did not play an important role in the maintenance and the spread of FMD, due to the low seroprevalence found (7,677 samples processed, of which 58 were VIA positive; prevalence 0.76%).

A serological sampling of cattle was carried out in September 2001, with the aim of estimating the protection level achieved with vaccination. The design of this sampling plan was based on the fact that virus type O, from the October 2000 outbreak was successfully eradicated in December. It has, therefore, been assumed that all antibodies to the O type virus would be due to vaccination. On this assumption, the tests carried out assessed O type antibody level, as the best means to measure the number of successfully vaccinated animals. 2100 sera were analysed. The results suggest that an estimated protection level of 99.6% was achieved.

During this month (February 2002), a serological survey is being carried out in the bovine population. The general objectives will be to study the seroepidemiological situation in bovine and the evolution of viral activity with regard to the results obtained in 2001.

A serological survey in ovine is planned for May 2002.

### **Guarantee measures**

In order to provide guarantees to foreign markets, the General Department of Livestock Services has enforced additional measures, taking into account the country's new sanitary status, such as:

- Traceability
- Appropriate certification chain from farm to industrial plant, assuring the safe origin of the animals
- Adequate treatments of animal products in order to inactivate FMD virus (maturation, de-boning, heat treatment, etc.)

## **Markets' situation**

On Tuesday 9<sup>th</sup> October 2001, the Veterinary Committee of the European Union proposed to the Commission to grant authorisation to Uruguay to resume meat production (cattle, sheep and goats) for the European Union. The Commission issued Decision 2001/767/CE, dated 31 October 2001, authorising to resume production as from 1<sup>st</sup> November 2001. Other markets have also lifted their restrictions and resumed importation of meat and meat products from Uruguay, e.g., Israel, Egypt, Mercosur countries and other Latin-American countries.

**Note:** for further information please refer to OIE Sanitary Information, Uruguayan reports on FMD ([www.oie.int](http://www.oie.int)).